WHAT IS CLAIMED IS:

1. An electric optical microscope comprising:

an illumination optical system which illuminates a sample with illumination light rays;

an observation optical system which receives observation light rays from the sample and obtains an enlarged image of the sample;

a plurality of optical elements which realize a plurality of observation methods with respect to the sample by being selectively arranged on respective optical paths of the illumination optical system and the observation optical system;

an operation portion having arranged thereto a plurality of operation input ends used to indicate any one of a plurality of the observation methods;

a storage portion which allocates operation input allocation information indicative of the optical elements selected in accordance with a plurality of the observation methods and arrangement states of the optical elements on the respective optical paths of the illumination optical system and the observation optical system to a plurality of the operation input ends, and stores it therein;

a control portion which reads the operation input allocation information allocated to the operation portion from the storage portion upon detecting an operation to the operation input end, and arranges the

optical elements on the respective optical paths of the observation optical system and the illumination optical system in accordance with the operation input allocation information; and

an information setting portion which fetches the operation input allocation information from the outside through a communication line, allocates the fetched operation input allocation information to any one of a plurality of the operation input ends, and stores it in the storage portion.

2. The electric optical microscope according to claim 1, wherein a plurality of the observation methods are at least a bright field observation method, a dark field observation method, a differential interference observation method, a phase difference observation method, a fluorescent observation method, and a composite observation method which is a combination of the respective observation methods.

3. The electric optical microscope according to claim 1, wherein a plurality of the optical elements are at least permeation filter, a condenser lens, an object lens, a cube cassette having a plurality of filter cubes attached thereto which constitute the observation optical system, and

they are at least a permeation illumination light source, a permeation filter turret, a permeation aperture diaphragm, a reflected illumination light

source, a reflected filter turret which constitute the illumination optical system.

4. The electric optical microscope according to claim 1, wherein a plurality of the operation input ends are respective operation button switches.

5. The electric optical microscope according to claim 1, wherein the operation portion has a display portion which displays the arrangement states of the optical elements.

6. The electric optical microscope according to claim 1, wherein the operation input allocation information stored in the storage portion is at least a bright field observation method, a dark field observation method, a differential interference observation method, a phase difference observation method, a fluorescent observation method, and a composite observation method which is a combination of the respective observation methods as a plurality of the observation methods, and

a plurality of the optical elements are at least a permeation filter, a condenser lens, an object lens, a cube cassette having a plurality of filter cubes attached thereto, a permeation illumination light source, a permeation filter turret, a permeation aperture diaphragm, a reflected illumination light source, and a reflected filter turret arranged on the respective optical paths of the illumination optical

system and the observation optical system in accordance with a plurality of the observation methods.

7. The electric optical microscope according to claim 1, wherein the storage portion is a non-volatile memory.

8. The electric optical microscope according to claim 1, wherein the operation input allocation information consists of a plurality of sets of allocation information, and

a plurality of sets of the allocation information are respectively allocated to a plurality of the operation input ends and stored, and are indicative of arrangement states of a plurality of the optical elements on the respective optical paths of the observation optical system and the illumination optical system according to a plurality of the observation methods.

9. The electric optical microscope according to claim 8, wherein a plurality of sets of the allocation information indicate arrangement states of at least a permeation filter, a condenser lend, an object lens, a cube cassette having a plurality of filter cubes attached thereto, a permeation illumination light source, a permeation filter turret, a permeation aperture diaphragm, a reflected illumination light source, and a reflected filter turret as a plurality of the optical elements on the respective optical paths of

the observation optical system and the illumination optical system according to at least a bright field observation method, a dark field observation method, a differential interference observation method, a phase difference observation method, a fluorescent observation method, and a composite observation method which is a combination of the respective observation methods as a plurality of the observation methods.

10. The electric optical microscope according to claim 8, wherein the storage portion can add, change and delete a plurality of sets of the allocation information.

11. The electric optical microscope according to claim 9, wherein the storage portion can add, change and delete a plurality of sets of the allocation information.

12. The electric optical microscope according to claim 1, wherein, upon detecting an operation to the operation input end, the control portion reads the operation input allocation information allocated to the manipulated operation input end from the storage portion, and executes a program having described therein a command to arrange the optical elements on the respective optical paths of the observation optical system and the illumination optical system in accordance with the operation input allocation information.

13. The electric optical microscope according to claim 1, wherein the control portion exchanges information with an external host device through the communication line.

14. The electric optical microscope according to claim 1, wherein the information setting portion allocates the operation input allocation information fetched from an external host device through the communication line to any one of a plurality of the operation input ends, and stores it in the storage portion.

15. The electric optical microscope according to claim 14, wherein the external host device is a personal computer which transmits the operation input allocation information.

16. The electric optical microscope according to claim 1, having an external peripheral device attached to an electric optical microscope main body,

wherein the storage portion allocates information to perform an operation control over the external peripheral device to any one of a plurality of the operation input ends, and stores it therein.

17. The electric optical microscope according to claim 16, wherein the external peripheral device is a high-speed shutter system which opens/closes a shutter relative to the optical path of the illumination optical system.

18. The electric optical microscope according to claim 1, wherein the information setting portion allocates the operation input allocation information of the external peripheral device fetched from the external host device through the communication line to any one of a plurality of the operation input ends, and stores it therein.

19. The electric optical microscope according to claim 18, wherein the information setting portion allocates each of the operation input allocation information of a plurality of the external peripheral devices to each of a plurality of the operation input ends, and stores them therein.